

What is claimed is:

1. An aluminum alloy piping material for automotive tubes having excellent corrosion resistance and formability, which is
5 an annealed material of an aluminum alloy comprising, in mass percent (hereinafter the same), 0.3 to 1.5% of Mn, 0.20% or less of Cu, 0.10 to 0.20% of Ti, more than 0.20% but 0.60% or less of Fe, and 0.50% or less of Si with the balance being aluminum and unavoidable impurities, wherein the aluminum alloy piping
10 material has an average crystal grain size of 100 μm or less, and Ti-based compounds having a grain size (circle equivalent diameter, hereinafter the same) of 10 μm or more do not exist as an aggregate of two or more serial compounds in a single crystal grain.

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2. The aluminum alloy piping material for automotive tubes having excellent corrosion resistance and formability according to claim 1, wherein the aluminum alloy further comprises 0.4% or less (excluding 0%, hereinafter the same) of Mg.

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3. The aluminum alloy piping material for automotive tubes having excellent corrosion resistance and formability according to claim 1 or 2, wherein the aluminum alloy further comprises at least one of 0.01 to 0.2% of Cr and 0.01 to 0.2% of Zr.

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4. The aluminum alloy piping material for automotive tubes having excellent corrosion resistance and formability according

to any of claims 1 to 3, wherein the aluminum alloy further comprises at least one of 0.01 to 0.1% of Zn, 0.001 to 0.05% of In, and 0.001 to 0.05% of Sn.

- 5 5. A method of manufacturing an aluminum alloy piping material for automotive tubes having excellent corrosion resistance and formability, the method comprising hot extruding a billet of the aluminum alloy according to any of claims 1 to 4 into an aluminum alloy tube, cold drawing the aluminum alloy
10 tube, and annealing the cold-drawn product, wherein a reduction ratio of the cold drawing is 30% or more, a total reduction ratio of the hot extrusion and the cold drawing is 99% or more, and a temperature increase rate during the annealing is 200°C/h or more, the reduction ratio being expressed by $\frac{(\text{cross-sectional area before forming} - \text{cross-sectional area after forming})}{(\text{cross-sectional area before forming})} \times 100\%$.
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